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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,869	06/27/2003	Kirt Debique	302128.01/MFCP.149005	7494

45809 7590 12/23/2009

SHOOK, HARDY & BACON L.L.P.
(MICROSOFT CORPORATION)
INTELLECTUAL PROPERTY DEPARTMENT
2555 GRAND BOULEVARD
KANSAS CITY, MO 64108-2613

EXAMINER	
INGVOLDSTAD, BENNETT	
ART UNIT	**PAPER NUMBER**
2427	

MAIL DATE	DELIVERY MODE
12/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/608,869	DEBIQUE ET AL.	
	Examiner	Art Unit	
	Bennett Ingvoldstad	2427	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 6-26, and 28-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Quicktime 6 API reference (hereinafter "QT6 API") in view of US Pub No 2003/0079036 (hereinafter "Terada").

QT6 API discloses:

1. A method for processing media data, the method comprising:

receiving a plurality of media data streams (a movie stream [pgs. 2889, 2902] comprises a video and an audio stream) at once in different formats via a control layer (via the Quicktime framework);

modifying the media data streams in one or more stream sinks (stream sinks buffer or "preroll" the movie data [pgs 2901, 2901]);

implementing in a media sink one or more state machines to control a state of transfer of the media data streams (controlling movie playback [pg. 2895]) on a per stream basis (different streams may be enabled or disabled during playback

[pg. 2903]), the one or more state machines being implemented according to one or more control signals from the control layer (the Quicktime framework controls sound and video media handlers [pg. 2933-2935]), the media sink providing a common interface for processing the media data streams in different formats (via media handlers [pg 2933]); and

using the state of the media data streams to modify the functionality of the stream sinks (e.g., stopping playback when the stream runs out).

QT6 API does not further teach that the control layer signals the one or more stream sinks that one or more discontinuities exist in one or more media data streams by placing an associated marker in the one or more media data streams.

Terada teaches a control process that inserts a discontinuity indicator into a media data transport stream packet, thereby alerting the receiver, ie, the stream sink, that a discontinuity exists (para [0041], [0046]).

It would have been obvious to incorporate Terada's control method for indicating a discontinuity into the control layer of QT6 API for the purpose of preventing the receiver from detecting an MPEG standard violation (see Terada, para [0046]).

QT6 API further teaches the subject matter of the dependent claims as follows:

2. The method of claim 1 wherein the modification of the media data streams is dynamic [pg 2933].

3. The method of claim 1 further comprising:

throttling processing of the media data streams via the stream sinks based on one or more media sink components (media handlers interpret cached or "throttled" data from stream data [pg 2933]).

4. The method of claim 1 wherein one or more of the media sink and the stream sink provide notifications for events to the control layer (notification of packet loss – see "Discussion", pg. 1633; also pg. 2954).

6. The method of claim 1 wherein the media sink directs multiplexing of two or more of the media data streams into a same media sink (a "tween" track is multiplexed with another track to modify the other track [pg 3049]).

7. The method of claim 1 wherein the control layer directs control and timing for the media sink and the stream sinks [pg 2938].

8. The method of claim 1 wherein the control layer directs format negotiation to be performed in the stream sinks, the format appropriate for an output device [pg 3065].

9. The method of claim 1 wherein the control layer includes a media engine and a media processor, the media engine communicating with a core layer to direct a pipeline through one or more multimedia transforms and to the media sink (a layer for multimedia effects tracks, which transform the displayed stream [pgs 3070, 3071]).

10. The method of claim 9 wherein the core layer includes the media sink, the one or more stream sinks, a media source, the multimedia transforms and stream sources (the Quicktime framework comprises the core layer).

11. QT6 API discloses wherein the stream sink accesses an application programming interfaces (API) that enables the stream sink to access a pointer to the media sink (see OpenComponent call and QTVideoOutputBaseSetEchoPort call).

Claim 12, depending on claim 1, is rejected wherein the QT6 API further discloses an application programming interfaces (API) that provides an identifier for the media sink (see the “vo” variable in the QTVideoOutputBaseSetEchoPort call).

Claim 13, depending on claim 1, is rejected wherein the QT6 API further discloses an application programming interfaces (API) that provides a type of media in use (see Discussion section in SGGetChannelDeviceList call).

Claim 14, depending on claim 1, is rejected wherein the QT6 API further discloses an application programming interfaces (API) configured to cause processing of a sample of the media data (see DecompressSequenceBeginS call).

Claim 15, depending on claim 1, is rejected wherein the QT6 API further discloses an application programming interfaces (API) configured to remove any data that has not been processed (see DataHFlushCache call).

Claim 16, depending on claim 1, is rejected wherein the QT6 API further discloses an application programming interfaces (API) configured to place a marker in the data stream to determine when the stream sink has finished processing received data associated with the marker (see “tune” variable in TuneQueue call).

Claim 17, depending on claim 1, is rejected wherein the QT6 API further discloses an application programming interfaces (API) configured to identify an end of a segment of the media data (see “tune” variable in TuneQueue call).

18. The method of claim 9, wherein the core layer is configured to communicate to retrieve characteristics of a sample allocator (a “setup buffer” call allocates buffer space for stream samples, the core layer receiving characteristics such as an error code from the call [pgs 2196, 2197]).

19. The method of claim 9, wherein the core layer is configured to request that a sample allocator acquire any needed resources (setting up a buffer [pgs 2196, 2197]).

20. The method of claim 9, wherein the core layer is configured to request that a sample allocator end an asynchronous resource allocation process (see VDReleaseAsyncBuffers call).

21. The method of claim 9, wherein the core layer is configured to request that a sample allocator retrieve one or more of a maximum number of samples in a sample allocation and any requested samples [pgs 2196, 2197].

22. (Currently amended) The method of claim 9, wherein the core layer is configured to request that a sample allocator cancel one or more allocations (see VDReleaseAsyncBuffers call).

QT6 API teaches:

23. A computer readable medium having computer-executable instructions for processing data through a collection of one or more media objects, the computer-executable instructions performing acts comprising:

receiving a plurality of media data streams (a movie stream [pgs. 2889, 2902] comprises a video and an audio stream) at once in different formats via a control layer (via the Quicktime framework);

modifying the media data streams in one or more stream sinks (stream sinks buffer or "preroll" the movie data [pgs 2901, 2901]);

implementing in a media sink one or more state machines to control a state of transfer of the media data streams (controlling movie playback [pg. 2895]) on a per stream basis (different streams may be enabled or disabled during playback [pg. 2903]), the one or more state machines being implemented according to one or more control signals from the control layer (the Quicktime framework controls sound and video media handlers [pg. 2933-2935]), the media sink providing a common interface for processing the media data streams in different formats (via media handlers [pg 2933]); and

using the state of the media data streams to modify the functionality of the stream sinks (e.g., stopping playback when the stream runs out).

QT6 API does not further teach that the control layer signals the one or more stream sinks that one or more discontinuities exist in one or more media data streams by placing an associated marker in the one or more media data streams.

Terada teaches a control process that inserts a discontinuity indicator into a media data transport stream packet, thereby alerting the receiver/decoder that a discontinuity exists (para [0041]).

It would have been obvious to incorporate Terada's control method for indicating a discontinuity into the control layer of QT6 API for the purpose of preventing the receiver/decoder from detecting an MPEG standard violation (see Terada, para [0046]).

QT6 API further teaches the subject matter of the dependent claims as follows:

24. The computer readable medium of claim 23 wherein the modification of the data streams is dynamic [pg 2933].

25. The computer readable medium of claim 23 wherein the acts are further comprising: throttling the processing via the stream sinks based on one or more media sink components (media handlers interpret cached or "throttled" data from stream data [pg 2933]).

26. The computer readable medium of claim 23 wherein one or more of the media sink and the stream sinks provide notifications for events to the control layer (notification of packet loss – see "Discussion", pg. 1633; also pg. 2954).

28. The computer readable medium of claim 23 wherein the media sink directs multiplexing of two or more of the media data streams into a same media sink (a “tween” track is multiplexed with another track to modify the other track [pg 3049]).

29. The computer readable medium of claim 23 wherein the control layer directs control and timing for the media sink and the stream sinks [pg 2938].

30. The computer readable medium of claim 23 wherein the control layer directs format negotiation to be performed in the stream sinks, the format appropriate for an output device [pg 3065].

31. The computer readable medium of claim 23 wherein the control layer includes a media engine and a media processor, the media engine communicating with a core layer to direct a pipeline through one or more multimedia transforms and to the media sink (a layer for multimedia effects tracks, which transform the displayed stream [pgs 3070, 3071]).

QT6 API teaches:

32. A multimedia system comprising:

a control layer configured to receive a plurality of media data streams (a movie stream [pgs. 2889, 2902] comprises a video and an audio stream) at once in different formats from an application (via the Quicktime framework);

a core layer coupled to the control layer, the core layer including:

one or more media sink components (sound and video media handlers [pg. 2933-2935]) configured to implement one or more state machines to control transfer of the media data streams (controlling movie playback [pg. 2895]) on a per stream basis (different streams may be enabled or disabled during playback [pg. 2903]) through the multimedia system, the one or more state machines being implemented according to one or more control signals from the control layer (the Quicktime framework controls sound and video media handlers [pg. 2933-2935]), the media sink components providing a common interface for processing the media data streams in different formats (via media handlers [pg 2933]); and

one or more stream sinks configured to dynamically modify the media data streams via the control layer and an identified state of the media data streams determined in the media sink components (e.g., stopping playback when the stream runs out or the application stops the stream [pg 2895]).

QT6 API does not further teach that the control layer signals the one or more stream sinks that one or more discontinuities exist in one or more media data streams by placing an associated marker in the one or more media data streams.

Terada teaches a control process that inserts a discontinuity indicator into a media data transport stream packet, thereby alerting the receiver/decoder that a discontinuity exists (para [0041]).

It would have been obvious to incorporate Terada's control method for indicating a discontinuity into the control layer of QT6 API for the purpose of preventing the receiver/decoder from detecting an MPEG standard violation (see Terada, para [0046]).

QT6 API further teaches the subject matter of the dependent claims as follows:

33. The multimedia system of claim 32 wherein the control layer is an application programming interface (API) (see QT6 API).

34. The multimedia system of claim 32 wherein the control layer includes a media engine and a media processor, the media engine communicating with a core layer to direct a pipeline through one or more multimedia transforms and to the media sink (a layer for multimedia effects tracks, which transform the displayed stream [pgs 3070, 3071]).

35. The multimedia system of claim 32 wherein the core layer includes the media sink, the stream sinks, a media source, one or more multimedia

transforms and one or more stream sources (the Quicktime framework comprises the core layer).

36. The multimedia system of claim 32 wherein the core layer is configured to communicate with the media sink to retrieve the characteristics of the media sink (see GetMediaHandlerDesscription [pg. 2934]).

37. The multimedia system of claim 32 wherein the core layer is configured to communicate with the media sink to add an additional stream sink and remove one of the stream sinks (see PrePrerollMovie, which sets up network stream sinks for a movie, and AbortPrePrerollMovie [pg 2902]).

38. The multimedia system of claim 32 wherein the core layer is configured to communicate with the media sink, the media sink enabled to report the number of stream sinks associated with a given media sink (GetMediaPropertyAtom call returns a reference to the stream associated with a selected media handler [pg. 469, 470]).

39. The multimedia system of claim 32 wherein the core layer is configured to communicate with the stream sinks to send a pointer to a stream sink associated with the media sink by an index in the media sink (See

SGGetChannelDeviceList call, where the sequence grabber channel is associated with the stream sink [pg 1819]).

40. The multimedia system of claim 32 wherein the core layer is configured to communicate to send a pointer, to a stream sink associated with the media sink using a stream sink identifier (See SGGetChannelDeviceList call, where a stream sink identifier “c” is provided [pg 1819]).

41. The multimedia system of claim 32 wherein the core layer is configured to communicate to set a rate of a presentation clock and retrieve a presentation clock setting [pgs 3041-3043].

42. The multimedia system of claim 32 wherein the core layer is configured to communicate to retrieve characteristics of a sample allocator (a “setup buffer” call allocates buffer space for stream samples, the core layer receiving characteristics such as an error code from the call [pgs 2196, 2197]).

43. The multimedia system of claim 32 wherein the core layer is configured to request that a sample allocator acquire any needed resources (setting up a buffer [pgs 2196, 2197]).

44. The multimedia system of claim 32 wherein the core layer is configured to request that a sample allocator end an asynchronous resource allocation process (see VDReleaseAsyncBuffers call).

45. The multimedia system of claim 32 wherein the core layer is configured to request that a sample allocator retrieve one or more of a maximum number of samples in a sample allocation and any requested samples [pgs 2196, 2197].

46. The multimedia system of claim 32 wherein the core layer is configured to request that a sample allocator cancel one or more allocations (see VDReleaseAsyncBuffers call).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over QT6 API in view of Terada and US Pub No 2005/0132408 (hereinafter “Dahley”).

Regarding claims 5 and 27, depending respectively on claims 1 and 23, QT6 API does not specifically disclose wherein the media data stream switches to a second media sink upon a detection of invalid media sink.

Dahley discloses a hardware multimedia framework analogous to the software multimedia framework disclosed by QT6 API. Dahley's system switches between output data sinks based on whether the sink is detected as valid or invalid. See para [0107].

It would have been obvious to have implemented the output-switching technique in the framework of QT6 API for the purpose of enabling the framework to recognize the connection and disconnection of output devices and to respond appropriately to switch media sinks.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bennett Ingvoldstad whose telephone number is (571) 270-3431. The examiner can normally be reached on M–F 9–5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bennett Ingvoldstad/
Examiner, Art Unit 2427

/Jason P Salce/
Primary Examiner, Art Unit 2421
12/20/009